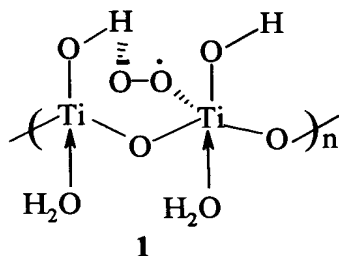


We claim:

1. A process for the oxidation of phenols which comprises treating a solution of the phenol with an oxidant in the presence of Ti-superoxide heterogeneous catalyst of formula 1,



followed by subsequently treating the mixture of phenol solution and oxidant and catalyst with water at a temperature of about 100°C, and then terminating the reaction by bringing the reaction mixture to room temperature, extracting and purifying the product to obtain the oxidized phenol.

2. A process as claimed in claim 1 wherein the strength of the oxidant H_2O_2 is in the range of 10-90%, preferably around 30-50%.

3. A process as claimed in claim 1 wherein the oxidant comprises 10 – 50% of aq. H_2O_2 .

4. A process as claimed in claim 1 wherein the oxidant comprises 30% of aq. H_2O_2 .

5. A process as claimed in claim 1 wherein the phenol solution comprises a solution of phenol in a solvent selected from an organic solvent or water.

6. A process as claimed in claim 5 wherein the organic solvent is selected from the group consisting of acetonitrile, acetone, methanol and acetic acid

7. A process as claimed in claim 1 wherein the phenol is a substituted phenol.

8. A process as claimed in claim 7 wherein the substituent on the phenol is selected from the group consisting of H, Me, Cl, Br, I and *t*-Bu.

9. A process as claimed in claim 1 wherein the phenol is selected from the group consisting of phenol, o-cresol, m-cresol, 2,6-dimethylphenol, 2-butylphenol, 2,6-dibutylphenol, 4-chlorophenol, 4-bromophenol, 4-iodophenol and 2,4-dichlorophenol.

10. A process as claimed in claim 1 wherein the reaction of the phenol in solution with the oxidant is carried out at a temperature in the range of 50-80 °C and for a time of 1-10 h.

11. A process as claimed in claim 10 wherein the temperature is in the range of 50 - 60°C and the time period is in the range of 1 to 3 hours.

12. A process as claimed in claim 1 wherein the phenol is converted at up to 100% and the catalyst shows a selectivity of up to 99%.

13. A process as claimed in claim 1 wherein the catalyst is recycled to the reactor.